

**REMARKS**

Claims 1-33 are pending. No claims have been added, amended, or cancelled.

Claims 1-10, 12-18, and 20-33 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Campbell (U.S. Patent No. 5,521,515) ("Campbell"). Applicant traverses the rejection accordingly.

Claim 1 recites "a method for detecting an object using a capacitive sensor output signal" comprising, *inter alia*, "measuring an output from the capacitive sensor at spaced apart intervals to obtain a sequence of output values."

Campbell discloses a frequency scanning capaciflector sensor system. According to Campbell, the disclosed capaciflector sensor system includes a frequency scanning technique that enables the system to identify the type of material being sensed and the distance away from the object being sensed. (Col. 3, Lines 63-Col. 4, Line 1) The frequency scanning technique scans an object at a fixed location using varying frequencies to obtain a series of sensed capacitance data. (Col. 3, Lines 63-65) In other words, Campbell describes a system which allows a sensor to be moved from one position to another to determine the material type and approximate distance of the object at a particular point based upon a scan of the object carried out by varying the frequency at that point. Thus, unlike Applicant's claimed invention, Campbell does not measure the output from the capaciflector sensor at spaced apart intervals.

The Examiner asserts that Campbell discloses "a method for detecting an object using a capacitive sensor output signal, comprising measuring an output  $V_o$  from the capacitive sensor 26 at spaced apart intervals." (Page 2) Applicant respectfully submits that Campbell does not measure the output at "spaced apart intervals" to obtain a sequence of sensed capacitance values. The only reference to moving the sensor is in relation to Figure 5 and described in column 5, line 63 onwards where it is indicated that the sensor can be connected to a vehicle in order to measure the material over which the vehicle is driving. Campbell does not suggest taking a measurement at one position,

then moving to a position spaced apart from the initial position and taking another measurement, and then repeating this to obtain a sequence of output values which is then compared with data indicative of an ideal sensor output to determine if an object has been detected. Therefore, rather than measuring the output at “spaced apart intervals” as the sensor is moved physically over a distance as claimed, Campbell discloses scanning an object at a fixed position using varying frequencies to produce a profile of the object which remains at a constant distance from the sensor.

In contrast to Campbell, Applicant’s claimed invention takes readings of the output for a capacitive sensor at spaced apart intervals as the sensor moves. By producing a profile of the output signal relative to the position or spacing of the spaced apart intervals, a comparison can be made between the generated profile and a reference output to determine whether the object is a highly conductive object located far from the sensor or a low conductivity object located close to the sensor. Through the comparison, the system is then able to determine information about the proximity of the detected object.

Because Campbell does not teach or suggest “measuring an output from the capacitive sensor at spaced apart intervals,” the rejection of claim 1 should be withdrawn and the claim allowed.

Claims 2-10 and 12 depend directly or indirectly from claim 1 and are allowable over Campbell for at least the reasons stated above with respect to claim 1 and on their own merits. Therefore, the rejection of claims 2-10 and 12 should be withdrawn and the claims allowed.

Independent claims 13, 18, 24, 27, and 32 each recite similar limitations to those of claim 1 quoted above. Claims 13, 18, 24, 27, and 32 are allowable over Campbell for at least the reasons stated above with respect to claim 1 and on their own merits. Therefore, the rejection of claims 13, 18, 24, 27, and 32 should be withdrawn and the claims allowed.

Claims 14-17 depend directly or indirectly from claim 13 and are allowable over Campbell for at least the reasons stated above with respect to claim 13 and on their own merits. Therefore, the rejection of claims 14-17 should be withdrawn and the claims allowed.

Claims 20-23 depend directly or indirectly from claim 18 and are allowable over Campbell for at least the reasons stated above with respect to claim 18 and on their own merits. Therefore, the rejection of claims 20-23 should be withdrawn and the claims allowed.

Claims 25 and 26 depend from claim 24 and are allowable over Campbell for at least the reasons stated above with respect to claim 24 and on their own merits. Therefore, the rejection of claims 25 and 26 should be withdrawn and the claims allowed.

Claims 28-31 depend from claim 27 and are allowable over Campbell for at least the reasons stated above with respect to claim 27 and on their own merits. Therefore, the rejection of claims 28-31 should be withdrawn and the claims allowed.

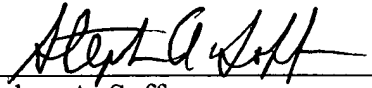
Claim 33 depend from claim 32 and are allowable over Campbell for at least the reasons stated above with respect to claim 32 and on their own merits. Therefore, the rejection of claim 33 should be withdrawn and the claim allowed.

The Examiner's indication of allowable subject matter in claims 11 and 19 is acknowledged and appreciated. However, in view of the remarks above, Applicant respectfully submits the respective base claims of claims 11 and 19 are allowable in their own right.

In view of the above, Applicant believes the pending application is in condition for allowance and respectfully requests that it be passed to issue.

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Respectfully submitted,

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